

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/003442

International filing date (day/month/year)
23.02.2005

Priority date (day/month/year)
27.02.2004

International Patent Classification (IPC) or both national classification and IPC
F02F1/20

Applicant
YAMAHA HATSUDOKI KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/003442

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/003442

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	5 - 15
	No: Claims	1 - 4
Inventive step (IS)	Yes: Claims	
	No: Claims	1 - 15
Industrial applicability (IA)	Yes: Claims	1 - 15
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V.

Reference is made to the following documents:

- D1 : GB 2 294 471 A (* MERCEDES-BENZ AG) 1 May 1996
- D2 : GB 2 302 695 A (* MERCEDES-BENZ AG) 29 January 1997
- D3 : US 3 333 579 A (SHOCKLEY GILBERT R ET AL) 1 August 1967
- D4 : US 5 131 356 A (SICK ET AL) 21 July 1992
- D5 : US 6 030 577 A (COMMANDEUR ET AL) 29 February 2000
- D6 : US 3 723 209 A (SEKIGUCHI T,JA ET AL) 27 March 1973
- D7 : DORSCH ET AL: "Alusil-Zylinder und Ferrocoat-Kolben für den Porsche-Motor 911" MTZ MOTORTECHNISCHE ZEITSCHRIFT, vol. 35, no. 2, 1974, pages 33-41, XP002329953

As can be seen in the passages cited in the search report, all of the above mentioned documents describe engine components made of an aluminium alloy containing silicon in which the range of primary crystal grain size at least partially corresponds to that of claim 1. Thus novelty is lacking.

The remaining claims do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and or inventive step (Article 33(2) and (3) PCT) since they refer to components having features in ranges either explicitly disclosed, or within the range in which the skilled man would readily carry out his usual trials.

Re Item VII.

Multiple independent claims having different subject matter tend to disguise which features are important for the invention and thus make it difficult to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection. In the present case, claims 4, 10 and 11 contain all features of earlier claims yet they are not formulated as dependent claims.